

## ABSTRACT OF THE DISCLOSURE

Apparatus or systems which employ luminescence quenching to produce an oxygen concentration indicative signal. Components of such systems include: (1) an airway adapter, sampling cell, or the like having a sensor which is excited into luminescence with the luminescence decaying in a manner reflecting the concentration of oxygen in gases flowing through the airway adapter or other flow device; (2) a transducer which has a light source for exciting a luminescable composition in the sensor into luminescence and a light sensitive detector for converting energy emitted from the luminescing composition as that composition is quenched into an electrical - signal indicative of oxygen concentration in the gases being monitored; and (3) subsystems for maintaining the sensor temperature constant and for processing the signal generated by the light sensitive detector. Sensors for systems of the character just described, methods of fabricating those sensors, and methods for installing the sensors in the flow device.

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